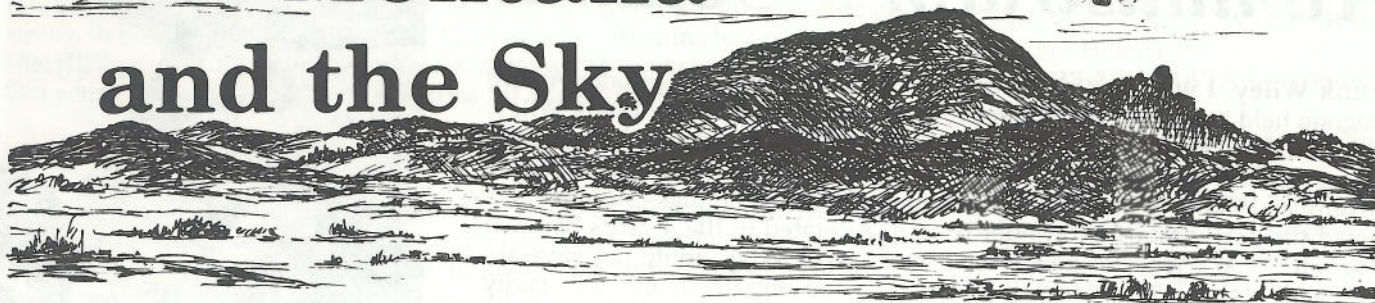


Montana and the Sky



Vol. 35, No. 12

MONTANA AERONAUTICS DIVISION

December 1984

BAKER AND BURIAN TO SPEAK AT STATE CONFERENCE

The Montana Aeronautics Division has received letters of acceptance from John L. Baker, president of the Aircraft Owners and Pilots Association, and Lawrence Burian, president of the National Air Transportation Association, to invitations to speak during the Montana Statewide Aviation Conference.

The Conference is scheduled for March 7-9, 1985, at the Sheraton Inn in Great Falls. The Great Falls Hangar of the Montana Pilots Association is hosting the Conference.

The Conference will take the place of the spring convention of the Montana Pilots Association and the spring meeting of the Montana Airport Managers Association. All the other state aviation groups have pledged their support and attendance. It is not necessary, however, to be a member of an aviation organization in order to attend—in fact, those who are not affiliated with an organization are specifically invited.

It is anticipated that this Statewide Conference will in coming years serve as the annual convention of most of the state groups. With expenses rising all the time, this should provide a substantial savings, particularly for those who attend more than one such conference each year. The Conference will also provide a time and place for the various facets of aviation in the state to meet and share ideas and ex-

periences. Such mutual understanding should prove a great benefit in creating a greater appreciation among the non-aviation community of the importance of aviation to the economic well-being of the state. It should also foster greater understanding among the various aviation groups.

An effort is being made to arrange for exhibits and speakers which will appeal to all the various special interests of the aviation community. Some firms which have tentatively agreed to prepare exhibits are aircraft manufacturers, air insurance agencies, avionics suppliers, oil companies, weather services, hangar manufacturers, airport maintenance suppliers, engineers, and commuter air carriers.

Tentative seminar sessions include aviation education, use of auto fuel in aircraft, aviation safety, airport maintenance and improvements and others. In addition, the annual Aviation Mechanics Refresher Seminar, sponsored by the Montana Aeronautics Division, will be held in conjunction with the Conference; and those sessions will be open to all Conference participants.

Advance registration forms will be included with the January issue of *Montana and the Sky* and will also be available at FBOs, through state organizations, and elsewhere around the state.

Mark your calendar to be in Great Falls March 7-9.

1985 Pilot Registration Beginning

The staff of the Aeronautics Division is preparing to send pilot registration cards for the 1985 registration to all currently registered Montana pilots. The mailing should be completed before the end of the month.

Pilot registration is required by Montana law, 67-3-211, MCA; and at only \$1 it's certainly worth the small amount of time required to fill out the card.

Aside from the fact that it is required, the benefits of pilot registration are not always apparent. One of the first, and probably the most important, is that the information on the card gives an immediate profile of the pilot. This information can be invaluable in the event of an aircraft search—either from the standpoint of understanding something of the pilot's capability or in developing lists of volunteers to assist in aircraft searches.

Mailing lists for invitations to seminars and refresher classes offered through the Aeronautics Division are also developed from information provided on pilot registration cards, and oftentimes pilots are not aware of a seminar or program because they are not currently registered or because they have moved and failed to notify the Division of a new address.

All this makes the \$1 registration fee a bargain.

Administrator's Column

Frank Wiley. I was honored to be invited to attend the Pathfinder Award program held in Seattle November 17, 1984, during which time Frank Wiley, first director of the Montana Aeronautics Commission and aviation pioneer, was recognized and inducted into the Pathfinder Hall of Fame. Frank died in November 1983, and his daughter, Bernice Mowat of Billings, Montana, accepted the posthumous Pathfinder Award. As stated in the awards banquet program, "The science of aviation, as we know it today, could not have approached its current state without the accomplishments of many aeronautical pioneers. In recognition of contributions of these individuals to Pacific Northwest aviation, the Museum of Flight has established the Pathfinder Award Program." The Pathfinder Award recognizes the categories of flying, education, engineering, operations, manufacturing, and an at-large category. Individuals are selected for courage and achievement in the advancement of aviation. It was very gratifying for me to see Frank Wiley honored, and I wish to recognize and thank Judy Nauman and Kathy Burk of the Northwest Mountain Region of the FAA for their help and hard work in compiling the historical data which was necessary for the Pathfinder selection committee's review of our nomination of Frank Wiley. Others attending the banquet from Montana in addition to Bernie Mowat and me were her husband, George, and Mr. and Mrs. Richard O'Brien of Conrad. Mr. O'Brien is a former member and chairman of the Montana Aeronautics Board.

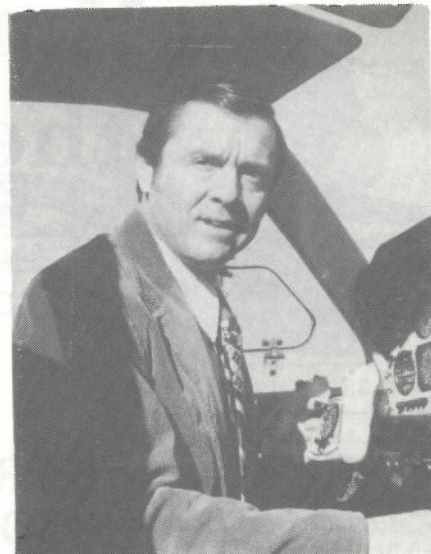
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Statewide Aviation Conference. Plans are shaping up for the combined Statewide Aviation Conference to be held at the Sheraton Inn in Great Falls on March 7, 8, and 9, 1985. This Conference is through the combined efforts of the Montana Aeronautics Board and Division and the Montana Aviation Advisory Council comprised of the aviation organizations of Montana. The Great Falls Hangar of the Montana Pilots Association volunteered to act as the host organization for the 1985 Conference. Many of the aviation people in Montana belong to more than one organization; and, therefore, it is felt that one combined conference could eliminate the need to attend so many individual functions, thus providing a benefit in considerable cost savings. Another factor to consider is that by holding one larger Conference we will be able to bring in more top name aviation leaders of government and the private sector to participate in the programs as well as offer exhibits. It is anticipated that this will be an annual conference, and a different organization member of MAAC will host it in a different location each year. **PLAN NOW TO ATTEND.** See more on the Statewide Aviation Conference elsewhere in this publication.

* * * * *

New Aeronautical Chart. We are in the preliminary stages of publishing a new Montana aeronautical chart, and we need your help. If you are aware of any corrections or changes needed in our current chart OR if you have or know of a private airstrip not depicted on the current chart, please let us know.

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ADMINISTRATOR'S COLUMN — Continued

Gary Buchanan. Gary Buchanan, director of the Department of Commerce, has recently announced his decision to leave state government and return to his private sector vocation. Gary will be returning to a position with Merrill Lynch of Billings. I would like to take this opportunity of extending Gary and his family the best of wishes for their future.

* * * * *

Keith Colbo. Governor Schwinden has announced his appointment of Keith Colbo to become the new director of the Department of Commerce. I would like to welcome and congratulate Keith on his appointment. We at the Aeronautics Division are looking forward to working with him. We plan to include a better introduction in next month's issue of *Montana and the Sky*.

* * * * *

WISHING YOU ALL A VERY MERRY CHRISTMAS AND A HAPPY AND PROSPEROUS NEW YEAR!



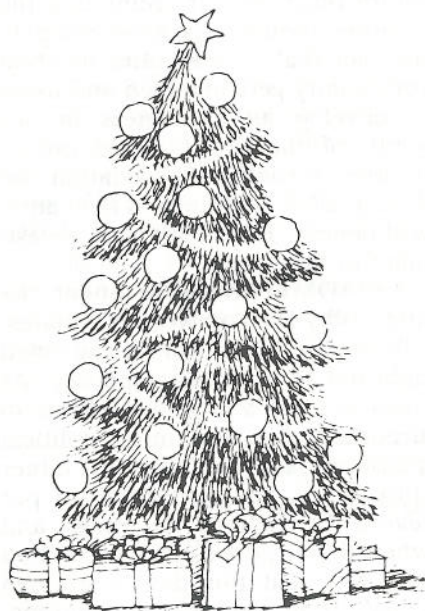
Let's Utilize Flight Watch

By: Nils Pearson, President
Montana Pilots Association

I am sorry to report that the Flight Watch Program (pilot reports and current weather conditions on 122.0) is **not** working in Montana.

Part of the problem stems from the generally poor radio coverage in many areas of our state. However, most of the problem is caused by the pilots themselves. We are not passing our first-hand weather information on to our fellow pilots through Flight Watch. This is not only important when we encounter worse-than-forecast conditions, but also better-than-expected conditions. It could allow someone to fly instead of drive (thus promoting aviation and enhancing its utilization).

Let's try something. If we each file a pilot report every time we fly, we would load up the system with all the possible information our fellow pilots could need. Let's start now and promise ourselves to use the system and see if we can improve our use of the airways this winter and spring.



CALENDAR

Jan. 12 - MPA Winter Board Meeting, Helena.

Jan. 23-26 - MATA Convention, Great Falls.

March 1-3 - Winter Survival Clinic, Helena and Lincoln.

March 7-9 - Aviation Mechanics Refresher Seminar, Great Falls.

March 7-9 - Statewide Aviation Conference, Great Falls.

March 22-24 - Flight Instructor Refresher Clinic, Helena.

April 28-May 1 - NATA Convention and Trade Show, Las Vegas, Nev.

July 26 - Aug 2 - EAA International Fly-In Convention, Oshkosh, Wisc.

Sept. 13-15 - Mountain Search Pilot Clinic, Kalispell.

MPA To Hold Winter Board Meeting

The Winter Board meeting of the Montana Pilots Association will be held in Helena on January 12 at the Aeronautics Division board room. The meeting will convene at 10:00 a.m. and all Montana Hangar presidents are invited to attend.

MOVING???

Each time a newsletter must be returned to us because of a wrong address, we pay the post office 25*. Returning charts and directories costs us even more. If you are moving, please take a little time to fill out the form below and mail it to us. It'll save both time and money!

NAME(Please Print) _____

NEW ADDRESS _____

NEW PHONE NUMBER _____

Aviation Education Importance Stressed

By: *Fred Hasskamp, Chief, Safety and Education Bureau*

Mike Ferguson, Aerospace Education Teacher Workshop Director Pat Johnson, and I were recently invited to make presentations explaining the Montana Aeronautics Division aviation education program at a regional FAA Aviation Education facilitators training conference held in Billings. Our presentations included slides of the teacher workshop programs.

The conference was conducted by Vince Visaya, FAA regional coordinator of Aviation Education for the Northwest Mountain Region in Seattle.

Aviation/aerospace education is not new to the Aeronautics Division—it has been a part of many Division programs since the 1950s.

The aviation/aerospace education program at the Aeronautics Division includes a free lending film library for pilot groups and schools which has been in operation for over 22 years.

The career awareness program, which includes airport tours for youth of all ages, is an important educational experience for almost 500 youth each year. These tours provide knowledge and develop attitudes favorable to airports and aviation in general. Education and help for teachers wishing to bring aerospace and aviation to the classroom at all levels is provided by the Aeronautics Division through the college Aerospace Workshop aviation program for Montana educators.

It is interesting to note that other facets of the aviation community are realizing the necessity of investing in aviation education for the youth of America in order to protect the future of aviation.

The FAA in 1983 drafted a "Policy Statement on Aviation Education" which encouraged FAA employees to take an active role in their communities and schools in promoting

increased understanding of aviation. An Aviation Education Facilitator has been designated at each FAA facility for the purpose of promoting aviation education in their respective communities. These people are available to speak to groups and to provide help in their communities as resource people.

The Aviation Distributors and Manufacturers Association (ADMA) has just begun a program encouraging FBOs to take an active role in conducting airport tours for school age youth to "...protect your future business." It seems that the aviation industry is awakening to the fact that if the entire aviation community gets involved and helps to develop an awareness in our youth of the benefits and opportunities through the aviation industry, all of aviation and the nation will benefit. Education is an investment in the future.

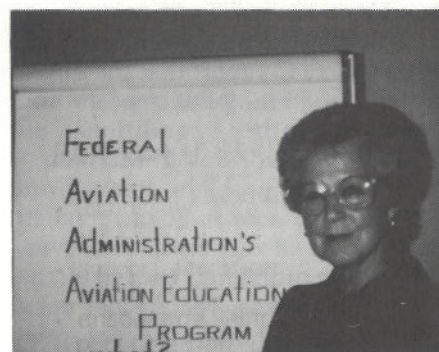
An ADMA brochure, under the title "Why Do You Need It?" states, "To keep yourself from being voted right out of business some day. As cities expand and crowd closer to airports, more and more political pressures are building to either close down the airport or to put severe restrictions on how and when the airport can be used. You may feel that this day is still ten years off in your particular situation; if you are right about that, then right now is the time to begin your Student Airport Tours Program! Why? Because if you begin now, ten years from now you will have had the opportunity to sell a sizeable bloc of voters on the benefits of General Aviation—benefits TO THEM! If you wait for another nine and one-half years, IT WILL BE TOO LATE! The time to begin selling General Aviation is NOW, BEFORE you need the support of the voters."

If you would like to further explore the possibilities of initiating such a program in your community and if you would like assistance,

contact Fred Hasskamp at the Montana Aeronautics Division, phone 444-2506.



Pat Johnson, Helena Workshop director, helped Mike Ferguson and Fred Hasskamp explain the Aeronautics Division's aerospace education program. She is pictured here with Vince Visaya, FAA regional coordinator of Aviation Education for the Northwest Mountain Region.



Mary Jo Knouff, Aviation Education Specialist of the FAA in Washington, D. C., was an instructor for the FAA Aviation Education facilitators training conference in Billings.



Campaign Begins For Use Of Harnesses

Manufacturers of general aviation aircraft and the world's largest pilot organization are joining forces to encourage pilots and passengers to take advantage of the extra protection offered by shoulder harnesses in aircraft where they are installed.

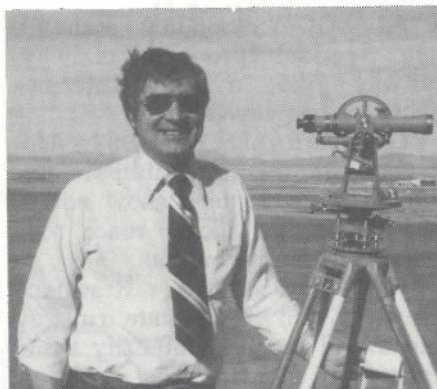
Aircraft Owners and Pilots Association (AOPA) and General Aviation Manufacturers Association (GAMA) have launched the campaign. The Experimental Aircraft Association (EAA) has also endorsed the effort. A shoulder harness pledge has been a part of the EAA membership application since 1953.

All general aviation aircraft manufactured since 1978 have shoulder harnesses in front seats, although some aircraft models have been so equipped for many more years, some of them installed at all seats. Now a new initiative by the manufacturers means that all aircraft they build after December 31, 1984, for Part 91 use will be equipped with shoulder harnesses at all forward facing seats.

Installation and use of shoulder harnesses is an effective means of improving survivability in aircraft accidents. Research has shown that serious injuries and fatalities would be reduced 35% if pilots and passengers wore shoulder harnesses.

According to Edward Stimpson, president of GAMA, "Pilots often consider the shoulder harness a piece of optional equipment, as its installation may be new to them since they began flying. It's common to see aircraft being taxied to the runway with shoulder harnesses stowed in their holders, even when a normally conscientious pilot would never think of starting his engine without every person in his seat belt. That's why the campaign stresses this point: 'Take advantage of EVERY piece of safety equipment available, including your shoulder harness.'"

NAV AIDS UPDATE



By: Jerry Burrows
Aviation Representative

A new solid state unicom was installed in the sheriff's office in Broadus in order to provide dependable air-ground communications for the Broadus area. They are operating on 122.8 MHz.

Non-directional beacons (NDBs). We operate a network of 24 NDBs throughout the state—many with IFR procedures.

We assume these stations are always operating except for occasional brief periods due to routine maintenance. Each location has a

monitor/alarm receiver; and, should something go wrong with the NDB, the receiver will alarm. The electronic technician and FAA are immediately notified, and the facility should be returned to service within a few hours. This is how the system is supposed to work.

The best way to tell how these radio transmitters are operating is in your aircraft. Tune them in as you are traveling Montana. Use the instrument approaches so we can justify keeping our existing approaches and also to develop approaches for additional stations.

The NDBs are for your use, established with Aeronautics fuel tax monies and maintained jointly with the local government. The vast area of Montana with few FAA navigational aids left many large gaps with absolutely no communications or navigational facilities. These voids are filled with NDBs.

Please let us know if any NDB is not on the air or has not been on the air for several days. If it's off the air waiting for parts, it will be NOTAMed.

Listed below are the nav aids in Montana. Aeronautics facilities are preceded by an asterisk (*).

RADIO FACILITIES CARD Montana Aeronautics Division

Location	Facility	Identifier	Location	Facility	Identifier
*BAKER	NDB 344	BKU	HELENA	VOR117.7	HLN
BILLINGS	VOR 114.5	BIL		NDB 317	HLN
	NDB 400	LKO	*JORDAN	NDB 263	JDN
BOZEMAN	VOR 112.1	BZN	KALISPELL	VOR 108.4	FCA
	NDB 329	AMD	LEWISTOWN	VOR 112.0	LWT
*BROADUS	NDB 335	BDX		NDB 353	LWT
BUTTE	VOR 11.6	BTM	*LIBBY	NDB 414	LYI
*CHOTEAU	NDB 269	CHX	LIVINGSTON	VOR 116.1	LVM
*CIRCLE	NDB 245	CRR	*MALTA	NDB 272	MLK
*CONRAD	NDB 293	CRD	MILES CITY	VOR 112.1	MLS
CUT BANK	VOR 114.4	CTB		NDB 320	HTN
	NDB 260	CTB	MISSOULA	VOR 112.8	MSO
DILLON	VOR 113.0	DLN		NDB 308	DST
DRUMMOND	VOR 117.1	DRU	*PLENTYWOOD	NDB 251	PWD
*EUREKA	NDB 392	EUR	*POLSON	NDB 275	PLS
GLASGOW	VOR 113.9	GGW	*RED LODGE	NDB 203	RED
*GLASGOW	NDB 339	MKR	*ROUNDUP	NDB 362	RPX
*GLENDALE	NDB 410	GDV	*SCOBAY	NDB 283	SCO
GREAT FALLS	VOR 115.1	GTF	*SHELBY	NDB 347	SBX
	NDB 371	GT	*SIDNEY	NDB 359	SDY
*HAMILTON	NDB 410	HMM	WHITEHALL	VOR 113.5	HIA
*HARLOWTON	NDB 242	HWQ	*WOLF POINT	NDB 404	OLF
HAVRE	VOR 111.8	HVR	*YELLOWSTONE	NDB 338	ESY
*HAVRE	NDB 389	LDS			

RECORD CONSTRUCTION SEASON ENDS

Montana's 1984 construction season was one of the most ambitious in memory for airport improvement projects in the state. Construction work totaling in excess of \$13 million was put under contract at 19 airports around Montana.

Although the major portion of the improvements have been completed, several projects have "finish up" work remaining to be accomplished. Following is an airport-by-airport breakdown of the major improvements undertaken this year.

Project amounts represent federal grant funds only. An asterisk denotes those communities which borrowed some or all of their 10% sponsor's share of funding from Montana Aeronautics Division through a Long Range Building Program loan as established by the 1983 legislature. At this writing, loans amounting to \$989,162 have been approved by the Aeronautics Board from the \$1.3 million authorized through that loan program. This leaves a balance of \$310,838 still available to the communities through June 30, 1985.

***BILLINGS:** \$2,817,000 - Porous friction course overlay for runway 27R/9L; improve lighting system for runway and taxiway; obstruction removal; drainage improvement; acquire snow removal equipment.

***BOZEMAN:** \$720,656 - Complete acquisition of land; rehabilitate general aviation apron, terminal apron, and parallel taxiway; install security fence; access road improvements.

BUTTE: \$442,404 - Rehabilitate surface of runway 15/33; install security fence; acquire land.

CIRCLE: \$17,747 - Complete land acquisition.

CHESTER: \$498,012 - Rehabilitate and extend runway; new MRL lighting system.

COLSTRIP: \$29,700 - Master Plan Study for new airport and site selection.

***GLASGOW:** \$585,000 - Rehabilitate terminal apron and taxiway, runway 7/25; medium intensity lights for runway 7/25.

***GREAT FALLS:** \$766,987 - Update Master Plan; rehabilitate terminal apron; acquire snow equipment; improve access road; miscellaneous improvements.

***HAVRE:** \$548,000 - Resurface runway 7/25; rehabilitate runway and install medium intensity lights on runway 3/21.

HELENA: \$2,316,592 - Porous friction course on runways 8/26 and 5/23 and parallel taxiway; stabilize shoulders of runway 8/26; grade safety area runway 08; acquire land for clear zone.

***KALISPELL** (Glacier Park Intl.): \$480,712 - Acquire land; reconstruct runway 1/19; construct helipad; security fence improvements.

***LINCOLN:** \$189,000 - Clear zone obstruction removal; reconstruct portions of runway; porous friction course on surface.

MISSOULA: \$1,257,817 - Update Master Plan; rehabilitate general

aviation apron; install apron lighting; construct partial parallel taxiway; infield grading and drainage improvements; improvements on air carrier apron; install runway and taxiway guidance signs.

***PHILIPSBURG:** \$99,000 - Resurface runway, install medium intensity lighting; shoulder drainage.

***PLENTYWOOD:** \$251,750 - Porous friction course on runway, taxiway, and apron.

***POPLAR:** \$332,987 - Porous friction course on runway, taxiway, and apron; new medium intensity lighting system; construct new taxiway; install perimeter fence.

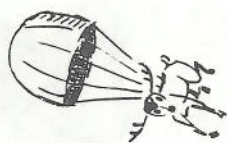
SHELBY: \$63,972 - Expand apron; improve perimeter fence.

***SIDNEY:** \$450,000 - Porous friction course on runway 1/19, apron, and taxiway; medium intensity taxiway lights; expand general aviation apron; construct helipad; new communications equipment.

***WOLF POINT:** \$438,000 - Rehabilitate runway, taxiway, and apron; construct access taxiway; miscellaneous improvements.



A distributor applies the fog seal on the runway at Philipsburg.



Vern Ruth West
Barbara
Gerry
mike
the

Happy Holidays

N447MA

Trivia From Our Archives

(From November 1962 *Montana and the Sky*)

Scientists have been studying the aerodynamics of how flies land on ceilings. Using high-speed photography, William G. Hyzer, a Wisconsin researcher, has come up with answers to the questions of whether the average fly directly approaches the ceiling upside down or whether it comes in right side up and goes into a last-second half-roll. The results were published in a recent issue of *Science*, a semi-technical publication of the American Association for the Advancement of Science.

For those who care, here is what a typical fly's landing on the ceiling involves: The fly approaches the ceiling in a near-vertical fashion at a little more than a half mile an hour. At about one body's length away, it cuts its wing power and thrusts all six legs forward. The two cushioned forefeet take the initial impact, and the fly hunches its body forward to bring the other four legs onto the ceiling. You might call the whole thing a dead-stick two- and four-point landing.

There are variations. One fly did go into a kind of rolling motion, or "cartwheel," before touching down.



2,500 copies of this public document were published at an estimated cost of \$.26 per copy, for a total cost of \$660.10, which included \$521.10 for printing and \$139 for distribution.

MEMBER

NATIONAL ASSOCIATION OF STATE AVIATION OFFICIALS

PURPOSE—"To foster aviation, as an industry, as a mode of transportation for persons and property and as an arm of the national defense; to join with the Federal Government and other groups in research, development, and advancement of aviation; to develop uniform laws and regulations; and to otherwise encourage cooperation and mutual aid among the several states."



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